MF29A

User Manual

LEGAL INFORMATION

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Content

Welcome 5

General Information 5

Safety Precautions 5
Cleaning and Maintaining 6
Limited Warranty 6
Limitation of Liability 7

Getting started 8

Appearance 8
LED Indicator 8
Interface Description 9
Installation 10
Inserting (U)SIM Card 10
Connecting to Phone 11
Connecting to Computer 11
Connecting to PSTN 11
Connecting to WAN/LAN 11
Connecting with External Power 11
Switching on Your Device 12
Power Supply 12

Voice 13

Making a Call 13
Answering a Call 13

Internet Access 14

Preparation 14
Establishing a connection between your device and the client. 14
Accessing the Internet 15

Accessing the Internet by Bridge Mode 15
Accessing the Internet by Cable Broadband 15
Accessing the Internet by 3G Gateway 16
Accessing the WebGUI Configuration Page 16
Login 17
Operation Mode 18
WAN Connection 18
In Cable Broadband mode 18
In 3G Gateway mode 19
SMS 20
Sending new SMS 20
Operating Messages in native 20
Settings 21
3G Settings 22
Wi-Fi Settings 24
Firewall 32
Advanced 37
Usage of WPS 40
U-Disk Master 41
Logout 41
Troubleshooting 42
Technical Parameters 44
Glossary 45

Welcome

Thank you for choosing ZTE MF29A Router (hereinafter referred to as “unit” or “router”). To get the most from your router and to keep it in the best condition, please read this manual carefully.

The pictures, symbols and contents in this manual are for your reference only. They might not be completely identical with your router. ZTE operates a policy of continuous development. We reserve the right to update the technical specifications in this manual at any time without prior notice.

General Information

Safety Precautions

- Some electronic devices may be susceptible to electromagnetic interference. Locate the router away from TV set, radio and other electronic equipment to avoid electromagnetic interference.
- The router may interfere with medical devices like hearing aids and pacemakers. Consult a physician or the manufacturer of the medical device before using the router.
- Please keep yourself at least 20 centimeters away from router.
- Do not use your router in dangerous environments such as oil terminals or chemical factories where there are explosive gases or explosive products being processed.
- Please use original accessories or accessories that are authorized by ZTE. Unauthorized accessories may affect the router performance, damage the router or cause danger to you.
- Do not attempt to dismantle the router. There are no user serviceable parts.
- Do not allow the router or accessories to come into contact with liquid or moisture at any time. Do not immerse the router in any liquid.

- Do not place objects on top of the router. This may lead to overheating of the device.
- The device must be placed in ventilation environment for use.
- Do not expose the router to direct sunlight or store it in hot areas. High temperature can shorten the life of electronic devices.
- Do not allow children to play with the router or charger.
- Keep the length of the cable between the router and the phone less than 10 meters.
- The router is for indoor use only. Do not use the router outside. Do not connect telephone extensions which run outside of the building. These can result in lightning damage to your unit.

Cleaning and Maintaining

- Use an antistatic cloth to clean the router. Do not use chemical or abrasive cleanser as these could damage the plastic case. Turn off your router before you clean it.
- Use the router within the temperature range of -10°C ~ +55°C, and the storage temperature range is -20°C ~ +65°C. The humidity range is 5%~95%.
- Do not use your router during a thunderstorm. Remove the mains power pack from the wall socket.
- Do not take out your (U)SIM card unnecessarily. The (U)SIM card may be easily lost or it can be damaged by static electricity.

Limited Warranty

- This warranty does not apply to defects or errors in the Product caused by:
  i. Reasonable Router Appearance Disfiguration.
  ii. End User's failure to follow ZTE's installation, operation or maintenance instructions or procedures.

iii. End User's mishandling, misuse, negligence, or improper installation, disassemble, storage, servicing or operation of the Product.

iv. Modifications or repairs not made by ZTE or a ZTE-certified individual.

v. Power failures, surges, fire, flood, accident, actions of third parties or other events outside ZTE's reasonable control.

vi. Usage of products of third Parties, or usage in conjunction with third party products provided that such defects is due to the combined usage.

vii. Any other cause beyond the range of normal usage for Products. End User shall have no right to reject, return, or receive a refund for any Product from ZTE under the above-mentioned situations.

- This warranty is end user's sole remedy and ZTE's sole liability for defective or nonconforming items, and is in lieu of all other warranties, expressed, implied or statutory, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, unless otherwise required under the mandatory provisions of the law.

Limitation of Liability

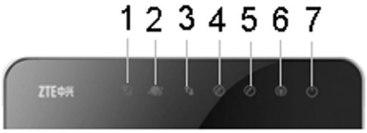
ZTE shall not be liable for any loss of profits or indirect, special, incidental or consequential damages resulting from or arising out of or in connection with using of this product, whether or not ZTE had been advised, knew or should have known of the possibility of such damages, including, but not limited to lost profits, interruption of business, cost of capital, cost of substitute facilities or product, or any downtime cost.

Getting started

The router operates on the HSPA+/HSUPA/HSDPA/WCDMA network and GSM/GPRS/EDGE network and supports voice and data service.

Appearance

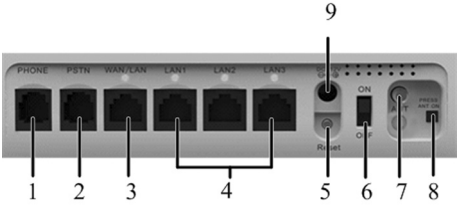
LED Indicator



Indicator	State	Description
1 WAN signal strength indication	ON	Signal strength is very good or good (RSSI >= -90dBm)
	Blinking	Signal strength is weak (-100dBm < RSSI < -90dBm)
	OFF	No signal
2 Network mode indication	Blue	Registered to 3G network
	Red	Registered to 2G network
	OFF	Not Registered

3 WAN connection status indication	ON	WAN connection established (PDP activated)
	Blinking	WAN connection establishing (PDP activating)
	OFF	WAN connection not established (PDP not activated)
4 Phone status indication	Off	PSTN not connected
	Blinking	Calling via PSTN
	On	PSTN connected
5 Phone status indication	Off	Local phone hang up
	Blinking	Phone picked up, ringing or network CS registering
	On	In calling.
6 WiFi indication	Off	WLAN shut down
	Blinking	WLAN working normally with data transmission
7 Power indication	ON	External power supply works normally.
	OFF	External power supply is disconnected or power off.

Interface Description



1. **Phone**: Standard RJ11 connector for Telephone.

2. **PSTN**: Standard RJ11 connector for PSTN.
3. **WAN/LAN**: Ethernet connections to internet. In 3G Gateway mode, it is LAN connector. In Cable broadband and Bridge mode, it is WAN connector.
4. **LAN1~LAN3**: Ethernet connections to computer.
5. **Reset**: Reset button
6. **ON/OFF**: Turn the router ON or OFF.
7. **ANT**: Connect to external antenna.
8. **PRESS ANT ON**: To switch between internal antenna and external antenna modes. By default setting, the router uses the internal antenna. When you connect the router with the antenna through ANT port, you can press ANT ON to change the router from the internal antenna mode to external antenna mode. Press ANT on again to change back.

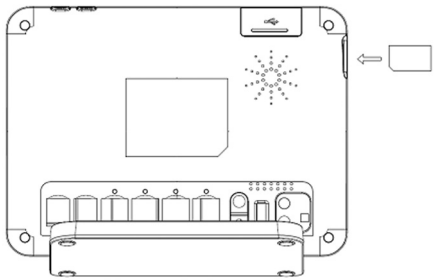
Note: If you press ANT ON without using external antenna, the RSSI signal of the router will be poor.

9. **POWER Socket**: Connection to the external power supply.

Installation

Inserting (U)SIM Card

Insert the (U)SIM card into the (U)SIM port.



Notes:

Please power off the router and remove the external power adapter before removing or inserting the (U)SIM card. If not, the router or (U)SIM card may be damaged.

About (U)SIM Card

Avoid handling the (U)SIM card unnecessarily. Hold the card by the edges to prevent static damage. Keep the (U)SIM card away from electrical and magnetic appliances.

If you cannot get service, make sure that:

- You are in an area which has network coverage.
- You are using the correct (U)SIM card.

Connecting to Phone

Connect the telephone to the **PHONE** interface with a phone cable(RJ11).

Connecting to Computer

Connect your computer to the **LAN** interface with an Ethernet cable (RJ45).

Notes:

The router will adapt the Ethernet cable style (crossover or straight) automatically.

Connecting to PSTN

Connect PSTN with a phone cable (RJ11).

Connecting to WAN/LAN

Connect WAN/LAN with an Ethernet cable (RJ45).

Connecting with External Power

Connect the external power adaptor to a standard power outlet. Insert the plug into the socket at the rear of the router.

Switching on Your Device

1. Turn the power switch on to get started. Make sure that the phone is on hook before power on.

Notes:

Do not put anything on the top of the router. Do not lay routers to overlap each other when using.

2. Wait 1 ~ 2 minutes after turning the router on before you use the service. The 3G & POWER indicator should be lit on.

Notes:

When the router is turned off, an incoming caller will hear the prompt like “The number you have dialed is currently unavailable.”

If the 3G LED is blinking constantly, try to move the router to another location. The router takes 1~2 minutes to initialize, attach to the network and obtain an IP address.

Power Supply

For normal operation, connect the router to the external power adapter. In case of power failure or when there is no available external power supply, the router will not work.

Voice

Making a Call

You have two ways to make a call:

- Through (U)SIM card.
- Through PSTN.

To make a call:

1. Pick up the handset.
2. Key in the telephone number.
3. You can either press **#** key on the telephone to send the call, or wait 4 ~ 8 seconds for the call to be connected automatically.
4. Call will be connected.

Notes:

If there is no 3G indication, the RF signal is unavailable. Change the location of the router and make sure nothing is blocking it.

Making a Trunk Call

If you are making a trunk call, add the area code as normal.

E.g. 03 9612 3456

Making an International Call

If you are making an international call, key in the international access code followed by the country code, area code and number.

E.g. 00 11 64 12 345678

Answering a Call

When the phone rings, pick up the handset to answer it. If the telephone has hands-free function you also can answer the call by pressing the **Hands-free** button. Press the **Hands-free** button again to end the call.

Internet Access

The router does not require any drivers, and it supports all operating systems with Ethernet LAN capability, such as Windows 2000, XP, Vista, MAC OS X and Linux.

Note: All the parameter settings in this chapter are just for your reference. Please contact your service provider for detail.

Preparation

Establishing a connection between your device and the client

Via RJ45 Ethernet cable

1. Connect your device and the client with the RJ45 Ethernet cable.
2. Power on your device.

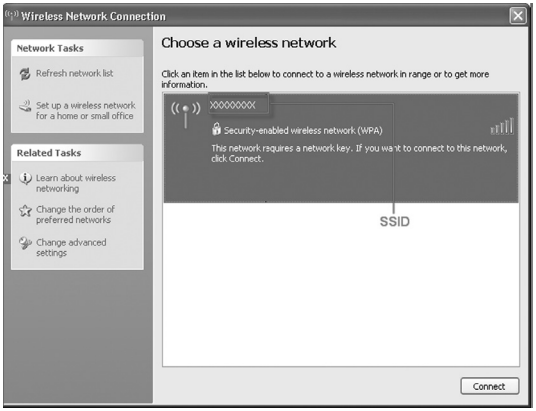
The connection between your device and the client will be established successfully a moment later.

Via Wi-Fi

1. Power on your device directly. It will take 1~2 minutes to initialize, and then Wi-Fi LED is blinking.
2. Use your normal Wi-Fi application on the client to search the available wireless network.

Notes: You need to check your Wireless Network Connection. Set the client to obtain an IP address automatically in the Internet protocol (TCP/IP) properties, and the client will get an IP address like" 192.168.0.100".

3. Select the SSID of your device, and then click **Connect**.


Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
XXXXXXXX
Security-enabled wireless network (WPA)
This network requires a network key. If you want to connect to this network, click Connect.
SSID
Connect

Notes: There will be a pop-up window to require the password. Please check the label on the battery compartment of your device to gain the SSID and preset password information.

4. Wait a moment, the connection between your device and the client will be established successfully.

Accessing the Internet

Before accessing the internet, make sure;

1. Switch on the device.
2. Establish a connection between your device and the client.

Accessing the Internet by Bridge Mode

1. Login the WebGUI and set the **Operation Mode** as **Bridge Mode**.
2. Connect the device with internet by **WAN**.

Accessing the Internet by Cable Broadband

1. Login the WebGUI and set the **Operation Mode** as **Cable Broadband**.
2. Connect the device with internet by **WAN**.
3. Set **WAN Connection** in WebGUI.

Accessing the Internet by 3G Gateway

Note:

Please make sure that you have install (U)SIM card before you switch on the device.

1. Login the WebGUI and set the **Operation Mode** as **3G Gateway**.
2. Set **WAN Connection** in WebGUI.

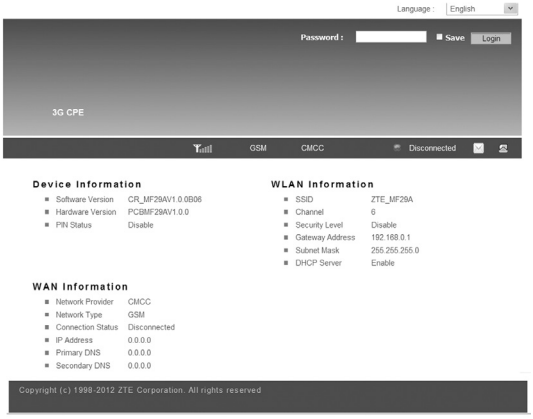
Accessing the WebGUI Configuration Page

1. Make sure the connection between your device and the client is correct.
2. Launch the internet browser and enter http://192.168.0.1 in the address bar.

Notes:

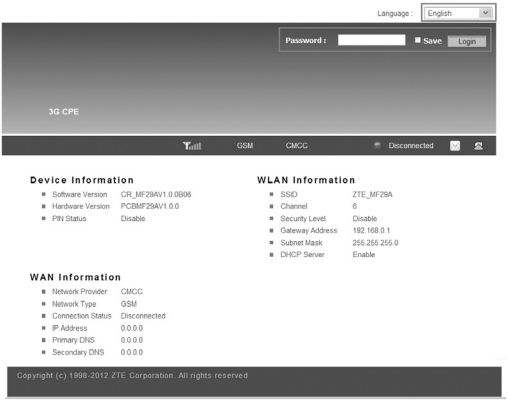
It is recommended that you use IE (6.0 or later), Firefox (2.0 or later), Opera (10.0 or later), Safari (4.0 or later) or Chrome (5.0 or later).

3. The login page appears as follows.



Login

In the WebGUI Configuration page, select the desired language and input the password (the default Password is **admin**).

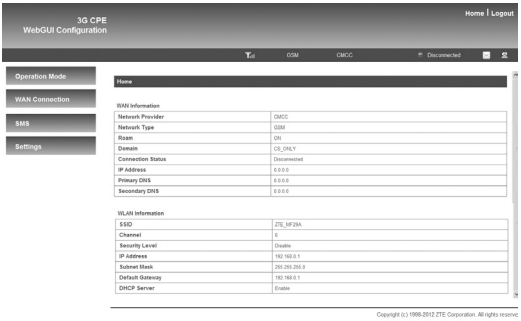


Click **Login** to log in the device.

Notes:

If you check **Save** after type in password, the device will save it. Next time when you want to login the device with the same password, what you need to do is click **Login**.

When you login, the following interface appears.

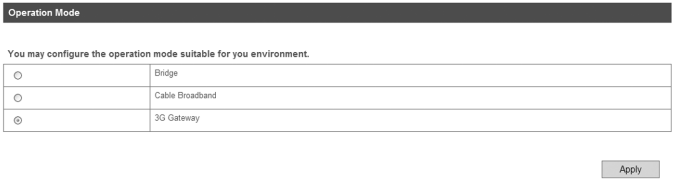


The whole interface is divided into three parts. Related functions can be executed by operation in the related areas.

- **Index area**: Show the configuration list for your device.
- **Content area**: Show the detailed configuration.
- **System Information Area**: Show the system status and different kinds of tips.

Operation Mode

When you fist login the webGUI, you need to choose the operation mode to make the correct setting.



Ethernet Port Status

There are three operation mode:

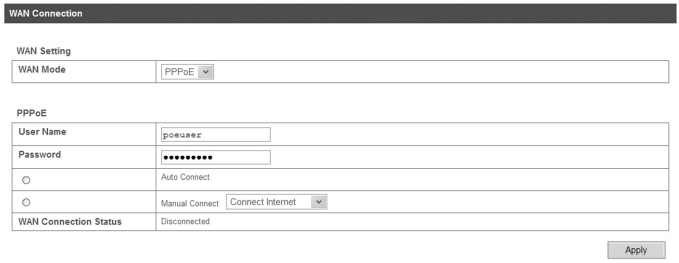
- Bridge Mode: Connect to Internet by WAN interface.
- Cable Broadband: Connect to Internet by WAN interface.
- 3G Gateway: Connect to Internet by (U)SIM.

Please choose the correct operation mode according to your actual network condition. For detailed information, please contact network operator. Click **Apply** to finish the setting.

WAN Connection

In Cable Broadband mode

Click **WAN Connection**, you can configure how to connect to the Internet.



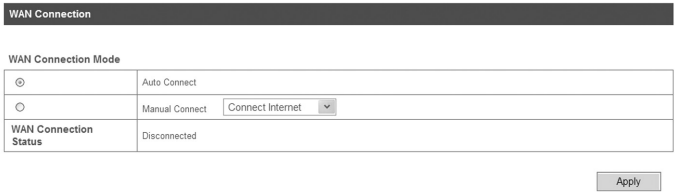
Select **PPPoE**, input the **User Name** and **Password** supplied by the network provider, and select the Connect mode.

- **Auto Connect**: The router will automatically connect to WAN when it is powered on.
- **Manual Connect**: Connect to Internet or disconnect from Internet manually.

Click **Apply** to confirm your configuration, and then the figure will show in the wan connection status.

In 3G Gateway mode

Click **WAN Connection**, you can configure how to connect to the Internet.



There are two connection modes:

- **Auto Connect**: The router will automatically connect to WAN when it is powered on.
- **Manual Connect**: Connect to Internet or disconnect from Internet manually.

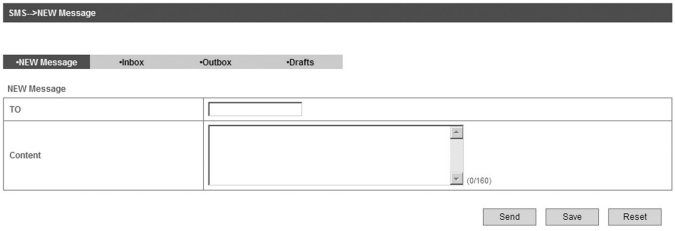
Click **Apply** to confirm your configuration, and then the figure will show in the wan connection status.

SMS

This function allows you to send or receive short messages. And you can use this function only in 3G Gateway mode.

Sending new SMS

1. Select **SMS > New Message** to access the following figure:



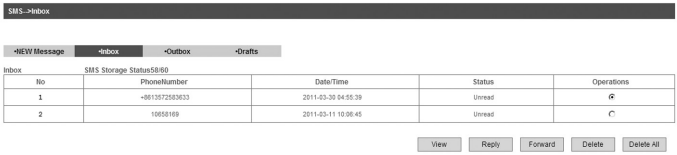
2. Enter the recipient's phone number.
3. Enter a message.
4. Click **Send** to send the message.

Operating Messages in native

You can check the messages saved in your device.

Inbox

Select **SMS > Inbox** to access the following figure:



All the received messages saved in your device will be displayed here.

- Click **View** to view the selected message.
- Click **Reply** to reply to the selected message sender.
- Click **Forward** to forward message to other person.
- Click **Delete** to delete the selected message.
- Click **Delete All** to delete all the messages.

Outbox

Select **SMS > Outbox** to access the following figure:

All the sent messages in your device will be displayed here.

Drafts

Select **SMS > Drafts** to access the following figure:

All the drafts saved in your device will be displayed here.

- Click **View** to access the edited interface of selected message, then click **Send** to send it.

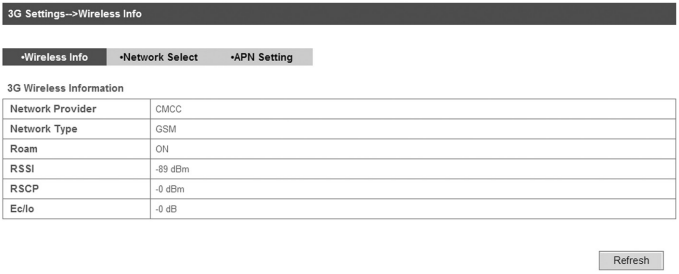
Settings

- Do not modify any settings unless instructed by your service provider.
- Please disconnect the device from the network before change the settings.

3G Settings

Wireless Info

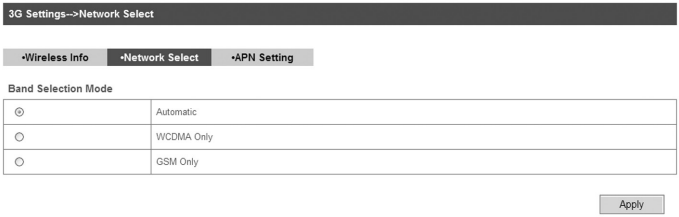
Select **Settings > 3G Settings > Wireless Info**, the 3G wireless information is shown in the following figure:



Click **Refresh** to update the wireless information.

Network Select

Select **Settings > 3G Settings > Network Select**, the Band Selection Mode is shown in the following figure:

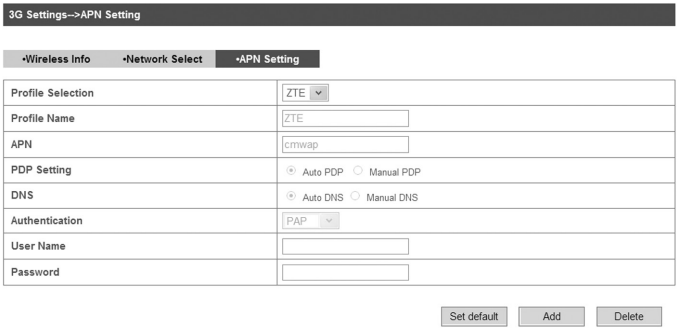


- **Automatic**: Device searches for available network.
- **WCDMA Only**: Device searches for WCDMA network only.
- **GSM Only**: Device searches for GSM network only.

Click **Apply** to confirm your configuration.

APN Setting

Select **Settings > 3G Settings > APN Setting**, the APN parameters are shown in the following figure:



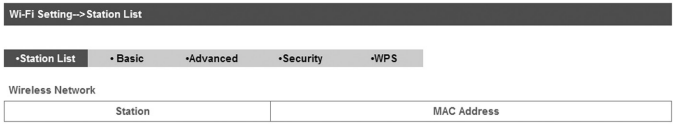
- **Profile Selection**: Choose the desired profile name.
- **APN**: Access Point Name.
- **PDP Setting**: PDP address mode. If a fixed IP address is given by your service provider, select **Manual PDP**. Otherwise select the **Auto PDP** and the router will automatically obtain this parameter.
- **DNS**: If a fixed IP address is given by your service provider, then choose **Manual DNS**. Otherwise, choose **Auto DNS**, and device will automatically obtain parameters.
- **Authentication**: Password Authentication Protocol (PAP) provides a simple method without encryption for the peer to establish its identity using a 2-way handshake. Challenge-Handshake Authentication Protocol (CHAP) is used to periodically verify the identity of the peer using a 3-way handshake.
- **User Name**: User name is used to obtain authentication from the ISP when the connection is established
- **Password**: Password is used to obtain authentication from the ISP when the connection is established.

Click **Set default** to set this profile as the default profile.

Wi-Fi Settings

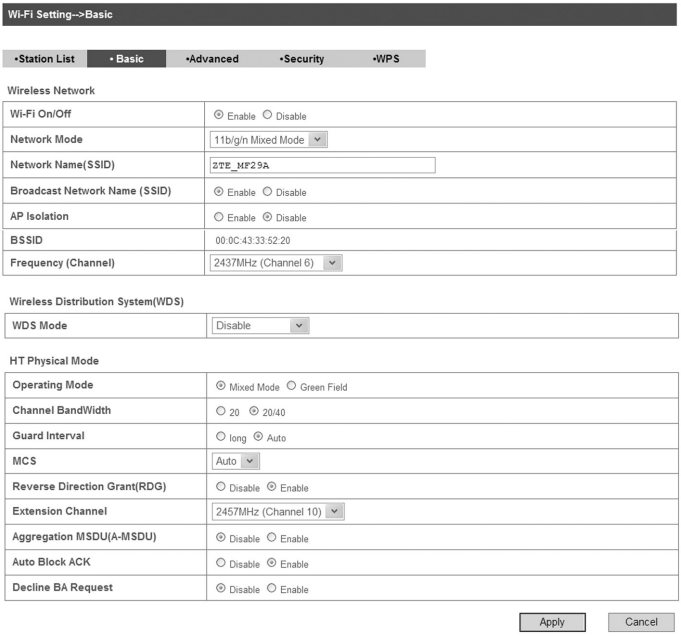
Station list

Select **Settings > Wi-Fi Setting > Station List**, the wireless network stations are shown in the following figure:



Basic

Select **Settings > Wi-Fi Setting > Basic**, the wireless network basic parameters are shown in the following figure:



- **Wi-Fi On/Off**: **Enable** Wi-Fi or not.
- **Network Mode**: If all of the wireless devices connect with this router in the same transmission mode, performance will be improved by choosing the appropriate wireless mode.
- **Network Name(SSID)**: Service Set Identifier (SSID). Enter a string less than 32 characters as the name for your wireless local area network (WLAN).
- **Broadcast Network Name(SSID)**: Disable or Enable (Default) this function. If **Enable** is selected, the router broadcasts the SSID, and other devices can detect and connect to it. If **Disable** is selected, the other devices cannot detect the router. You can only connect to the router by manual setting.
- **AP Isolation**: When **Enabled** is selected, each of your wireless clients will not be able to communicate with each other. When **Disable** is selected, each of your wireless clients will be able to communicate with each other.
- **BSSID**: MAC address of the Wi-Fi.
- **Frequency(Channel)**: Choose the appropriate channel to optimize the performance and coverage of your wireless network.
- **WDS Mode**: WDS mode make the router to communicate with other APs, WDS connection is two-way communication, APs should know each other's wireless MAC address. And make sure that all APs share the same SSID and channel.

WDS configuration is shown below:

Step	Description
1. Set the SSID and the same channel for APs	Manually set the SSID and the same channel is strongly recommended.

Step	Description
2.Select WDS mode: Disable, Lazy Mode, Bridge Mode or Repeater Mode	• If you select **Disable**, WDS is disabled. • If you select **Lazy Mode**, WDS is enabled, and set wireless MAC address only on the peer APs. • If you select **Bridge Mode**, WDS is enabled, and set the peer APs wireless MAC address on router. When you set **Bridge Mode**, your PC can not search SSID of AP after connected. • If you select **Repeater Mode**, WDS is enabled, and set the peer APs wireless MAC address on router. When you set **Repeater Mode**, your PC can search SSID of AP after connected.
3.Select **Phy mode**: CCK,OFDM, HTMIX or GREENFIELD	**CCK**: 802.11b **OFDM**: 802.11g **HTMIX**: 802.11b/g/n Mixed Mode **GREENFIELD**: 802.11b/g Mixed Mode
4.Select **Encrypt Type**: WEP, TKIP, AES	If you select **NONE**, all the data transmitted without encryption, and other station can access router. If you select the Encrypt Type, you should set all APs the same Encrypt type and password to make the data transfer.
5.Set peer AP's wireless MAC address on router	Only **Repeater Mode** and **Bridge Mode** need this.

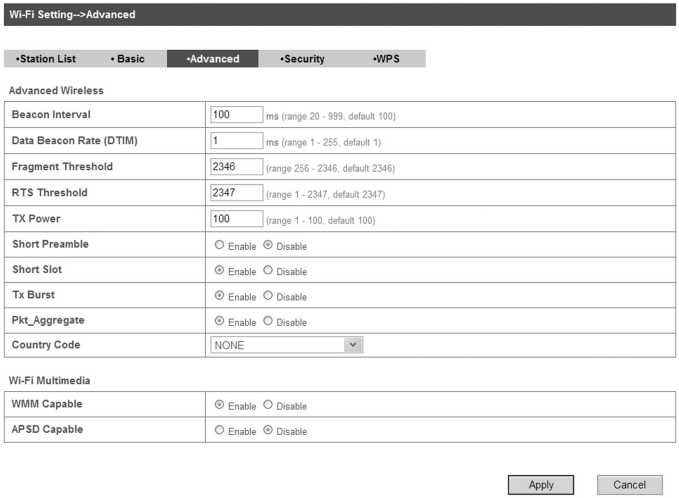
The HT physical Mode parameters are shown below:

- **Operating Mode**: In **Mixed Mode**, packets are transmitted with a preamble compatible with the legacy 802.11a/g, the rest of the packet has a new format. In **Green Field**, high throughput packets are transmitted without a legacy compatible part.
- **Channel Bandwidth**: Set the HT physical channel bandwidth.
- **Guard Interval**: Guard interval is to introduce immunity to propagation delays, echoes and reflections, to which digital data is normally very sensitive.
- **MCS**: The Modulation and Coding Scheme (MCS) is a value that determines the modulation, coding and number of spatial channels.
- **Reverse Direction Grant(RDG)**: Enable **RDG** or not.
- **Extension Channel**: Set extension channel. Extension channel is also able to send and receive data.
- **Aggregation MSDU(A-MSDU)** :To enable Hyper Throughput TX Aggregate MAC Service Data Unit, select **Enable**.
- **Auto Block ACK**: Select to block ACK (Acknowledge Number) or not during data transferring. When you enable the WDS function, you should set to enable **Auto block ACK** to preventing the other effect during data transferring.
- **Decline BA Request**: Select to reject peer BA-Request or not.

Click **Apply** to confirm your configuration.

Advanced

Select **Wi-Fi Setting > Advanced**, the advanced wireless network parameters are shown in the following figure:



- **Beacon Interval**: The router broadcasts beacon message to announce that it has buffered frames to deliver. The default value is 100 (ms).Beacons are packets sent by an access point to synchronize a wireless network. Specify a beacon interval value. is recommended.
- **Data Beacon Rate(DTIM)**: A Delivery Traffic Indication Message(DTIM) informs next clients to listen to broadcast and multicast messages.
- **Fragment Threshold**: This value should remain at its default value of 2346. If you experience a high packet error rate, you may slightly increase your fragment threshold. Setting the fragment threshold too low may result in poor performance.
- **RTS Threshold**: Request To Send (RTS) threshold should be remained as the value of 2347. If you encounter inconsistent data flow, only minor modifications are recommended.
- **TX Power**: Transmit power should be remained as the value of 100.

- **Short Preamble**: The length of CRC block in the frames during the wireless communication.
- **Shot Slot**: To indicate that 802.11g is using a shot time slot because there is no legacy station(802.11b) present.
- **Tx Burst**: Tx burst allows router to deliver better throughput in the same period and environment in order to increase speed.
- **Pkt_Aggregate**: Increase efficiency by aggregating multiple application packets data into a single transmission frame. In this way, 802.11n networks can send multiple data packets with the fixed overhead cost in just a single frame.

Country Code: Select the region you live.

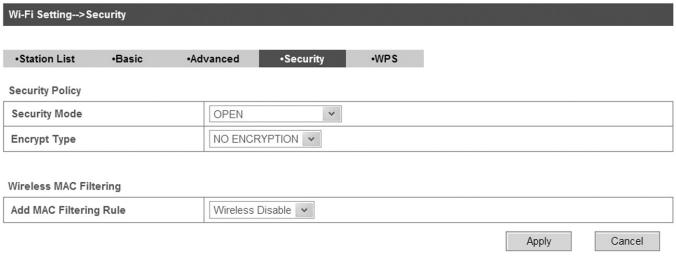
The Wi-Fi multimedia parameters are shown below:

- **WMM Capable**: When multimedia contents are transferred over wireless network, this function enhances data transfer performance.
- **APSD Capable**: Automatic Power Save Delivery (APSD),enable or disable data flow using APSD during transmitting for power saving.

Click **Apply** to confirm your configuration.

Security

Select **Wi-Fi Setting > Security**, the Security parameters are shown in the following figure:



Unless one of these encryption modes is selected, wireless transmissions to and from your wireless network can be easily intercepted and interpreted by unauthorized users.

The security modes are described below:

- **Open**: You can authenticate successfully with a SSID, whether it is valid or empty.
- **Shared**: The WLAN clients who have the same WEP key with wireless gateway can pass the authentication and access the wireless network.
- **WEPAUTO**: Select WEP security automatically.
- **WPA-PSK**: WPA Pre-Shared Key, Enter the Pre-Shared key as a plain text (ASCII) pass-phrase of at least 8 characters.
- **WPA2-PSK**: It is the securer version of WPA with implementation of the 802.11i standard.
- **WPA-PSK/WPA2-PSK**: Apply both the WPA-PSK and WPA2-PSK scheme.

If the Authentication type is **Open**, **Shared**, **WEPAUTO**, the bottom part of the configuration page displays parameters as shown.

- **WEP Keys**: At most four keys can be set in the blank. Choose the primary key index. The primary key is the only key in use at a given time. Whatever keys you enter for an access point, you must also enter the same keys for the client adapter in the same order. In other words, WEP key 1 on the AP must match WEP key 1 on the client adapter, WEP key 2 on the AP must match WEP key 2 on the client adapter, etc. Select **Hex** if use 10 or 26 hexadecimal numbers (0~9, a~f or A~F). Select **ASCII** if use 5 or 13 ASCII characters (case-sensitive).

If the Authentication type is **WPA-PSK** , **WPA2-PSK** or **WPA-PSK/ WPA2-PSK** , the bottom part of the configuration page displays WPA parameters.

- **WPA Algorithm**: **TKIP**, **AES** or **AUTO**.
- **Pass phrase**: You can input hexadecimal digits up to 64 characters or input ASCII characters choose a length of 63 characters or less.
- **Key Renewal Interval**: Define how long the key should be renew.

You can set **Wireless MAC Filtering**:

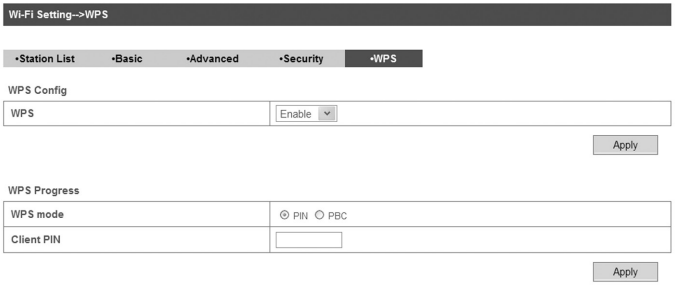
- **Wireless Disable**: If disabled, MAC address is not used to control network access.
- **Wireless Allow**: Set the MAC address that is allowed to access network.
- **Wireless Reject**: Set the MAC address that is not allowed to access network.

Click **Apply** to confirm your configuration.

WPS

Select **Wi-Fi Setting > WPS**, the WPS configuration is shown in the following figure:

Select **Enable**, click **Apply** ,the WPS settings are shown in the following figure:



WPS Summary, WPS Progress and WPS Status are all shown in the figure.

To set WPS, select WPS mode, the two modes are described below:

- **PIN**: Set the client's PIN code in **Client PIN** field.
- **PBC**: Press the WPS button of the router or select PBC, and then click **Apply**. Press WPS button on the client wireless adapter within two minutes, and the negotiation process will be established.

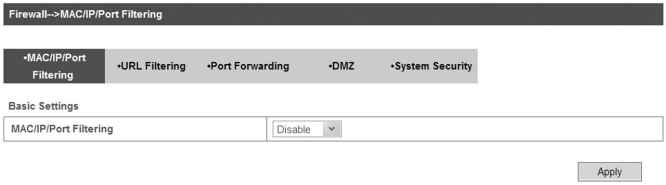
Firewall

You may setup firewall rules to protect your network from virus, worm and malicious activity on the Internet.

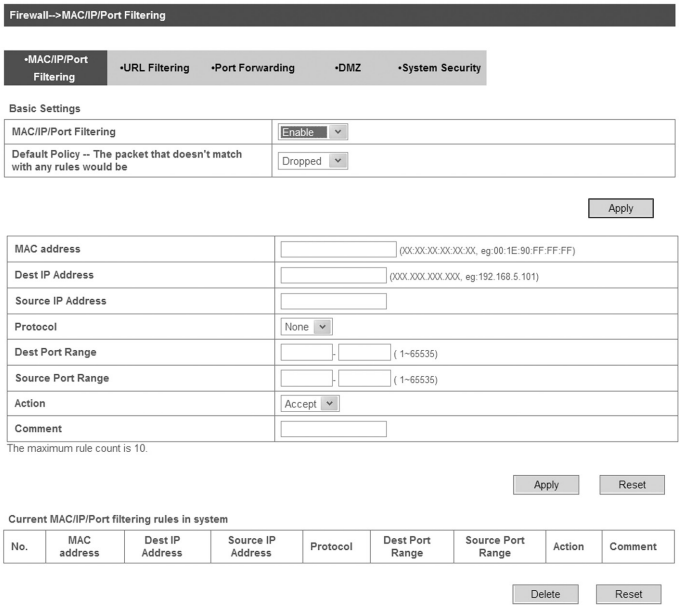
Notes: You can set the maximum 10 filtering items for **MAC/IP/Port Filtering**, **URL Filtering** and **Port Forwarding**.

MAC/IP/Port Filtering

Select **Settings > Firewall > MAC/IP/Port Filtering**, the MAC/IP/Port Filtering is shown in the following figure:



If you select **Enable**, the filter settings will appear:



- **Default Policy**: Set how to handle the packet if none of the rules matches.
- **MAC address**: Set the MAC address that will be filtered.
- **Dest IP Address**: Set the destination IP address that will be filtered.
- **Source IP Address**: Set the source IP address that will be filtered.
- **Protocol**: Set which protocol will be used for filtering.
- **Dest Port Range**: Set the destination port numbers that will be filtered

- **Source Port Range**: Set the source port numbers that will be filtered.
- **Action**: Set how to handle the packet if it matches with the rule.
- **Comment**: Type comment for the filter settings.

Notes:

Filtering rules are matched one by one, if met this provision, it will not continue to match the rules listed below.

Click **Apply** to confirm your configuration.

Click **Delete Selected** to delete the rule which you selected.

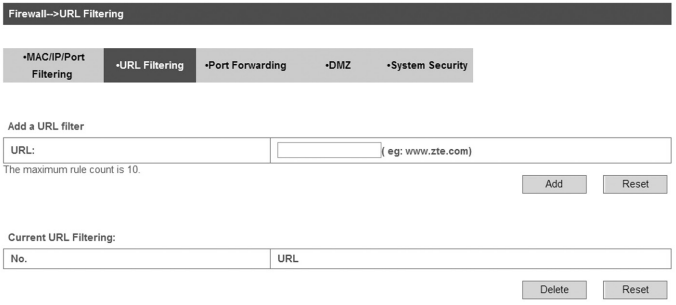
Click **Reset** to clear what you select or input.

To add a new rule:

1. Select **Enable** in the **Basic Settings** area.
2. Click **Apply**.
3. Input the detail information in the **MAC/IP/Port Filtering** area.
4. Click **Apply** in the **MAC/IP/Port Filtering** area.

URL Filtering

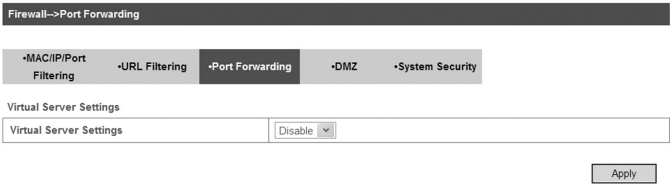
You can setup content filter to restrict the improper content access. Select **Firewall > URL Filtering**, the URL Filtering is shown in the following figure:



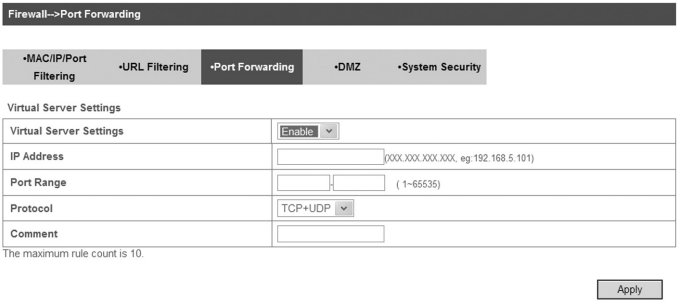
Type URL address, and then click **Add** to add the URL address into the filtering list. The new URL filtering item will be shown in the **Current Webs URL Filters**: field.

Port Forwarding

You can setup virtual servers to provide services on the Internet. Select **Firewall > Port Forwarding**, the virtual server settings is shown in the following figure:



If you select **Enable**, the Virtual Server Settings will appear:

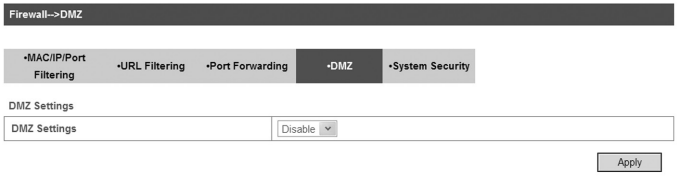


- **IP Address**: Set IP address for the virtual server.
- **Port Range**: Set port numbers for the virtual server.
- **Protocol**: Set protocol for the virtual server.
- **Comment**: Type comment for the virtual server settings.

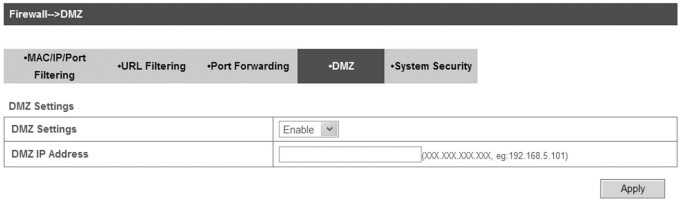
Click **Apply** to confirm your configuration.

DMZ

You can setup a De-militarized Zone(DMZ) to separate internal network with the Internet. Select **Firewall > DMZ**, the DMZ setting is shown in the following figure:

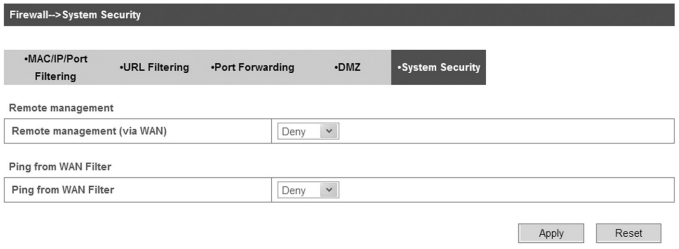


If you select **Enable**, set the **DMZ IP Address**, and then click **Apply** to confirm your configuration.



System Security

You can configure system firewall to protect AP or router from being attacking. Select **Firewall > System Security**, the system security setting is shown in the following figure:

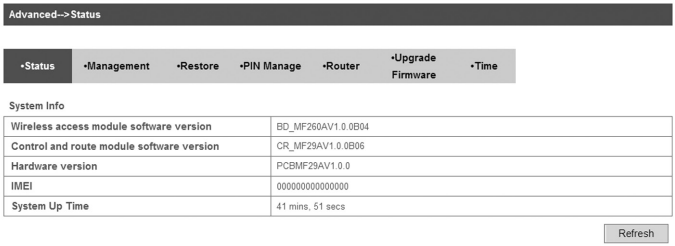


Allow or **Deny** the remote management function, **Allow** or **Deny** ping from WAN filter on requirement, and then click **Apply**.

Advanced

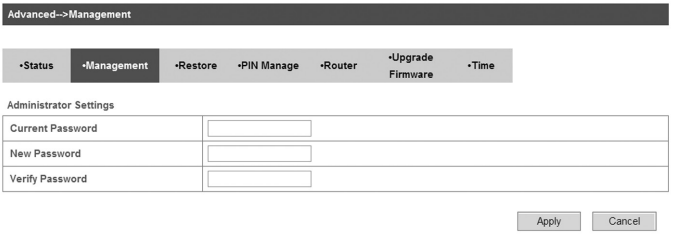
Status

Select **Settings > Advanced > Status**, the system information is shown in the following figure:



Management

Select **Settings > Advanced > Management**, the administrator settings information is shown in the following figure:



You can change the administrator's password. Click **Apply** to confirm your configuration.

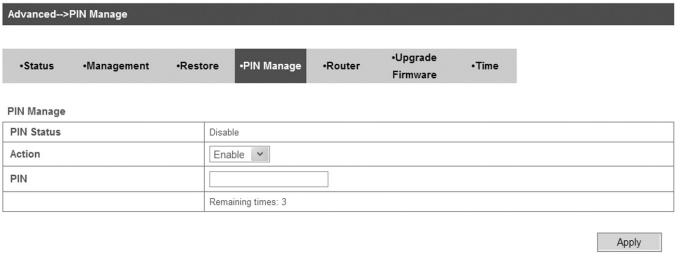
Restore

Select **Settings > Advanced > Restore**, click **Restore** to set all the settings to their factory default values, and then the device will restart automatically.

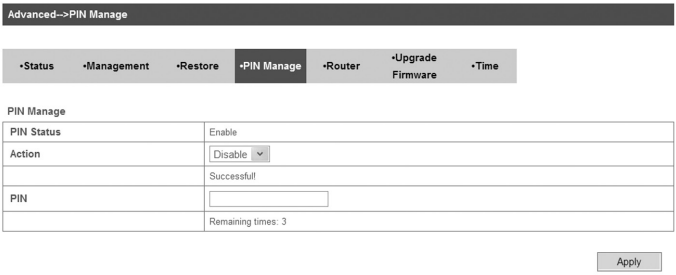
PIN Manage

Note: Pin Manage can be used in 3G Gateway mode.

Select **Settings > Advanced > PIN Manage**, the PIN manage is shown in the following figure:



If you select **Modify**, the modification parameters are shown in the following figure:



Type the old PIN code, and then type two times the new PIN code. Click **Apply** to confirm your configuration.

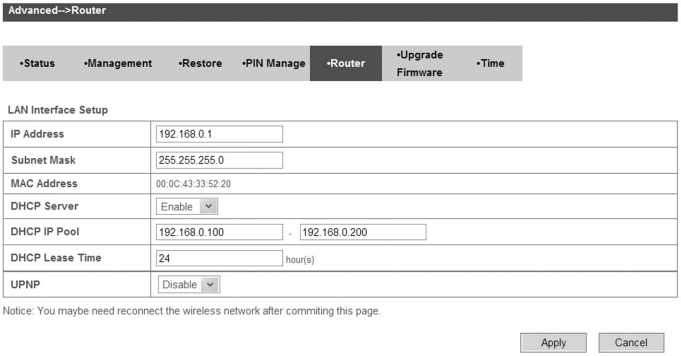
Notes:

Three times consecutive wrong PIN code entries will block the (U)SIM card. To unlock, you need PUK. PIN code and PUK code may be offered together with the (U)SIM Card. If not, please contact with network operator.

Router

Note: Router can be used in 3G Gateway mode and Cable Broadband mode.

Select **Settings > Advanced > Router**, the router information is shown in the following figure:

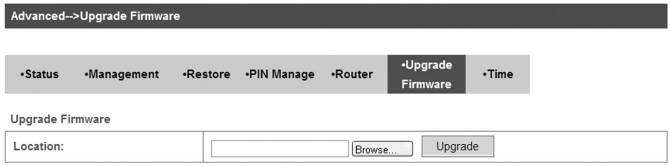


- **IP Address**: IP address for LAN interface.
- **Subnet Mask**: Subnet mask for the IP address.
- **MAC Address**: MAC address for the LAN interface.
- **DHCP Server**: Enable or disable DHCP Server function.
- **DHCP IP Pool**: Allocate begin and end IP address for IP pool.
- **DHCP Lease Time**: Define how long the leased IP address will be expired, and will relocate new IP address.

Click **Apply** to confirm your configuration.

Upgrade Firmware

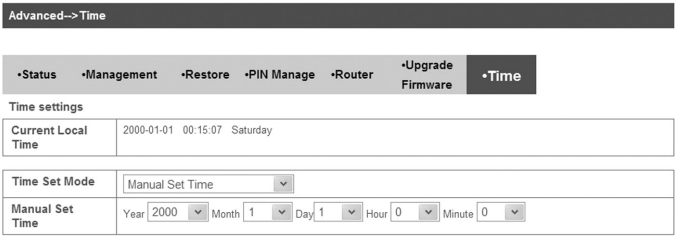
Select **Settings > Advanced > Upgrade Firmware** to upgrade the software version of the router.



Click **Browse...**, locate the latest software version, and then click **Upgrade**.

Time

Select **Settings > Advanced > Time** to set the time of the router.



Usage of WPS

If your client device supports WPS, you need not to input the password manually after WPS has been available. Please do the following:

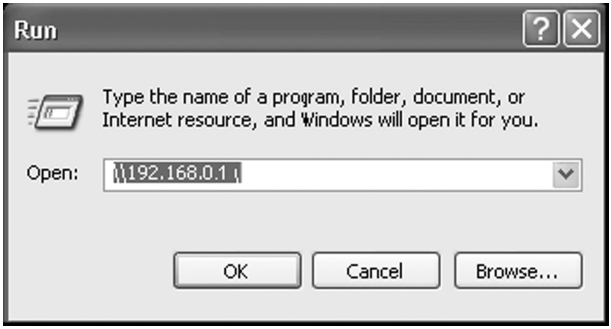
1. Start up your device.
2. Launch the client device connected to your device.
3. Enable the WPS function of your device.
4. Enable the WPS function of the client.

Notes:

For the detailed operations about the client, please refer to the client's instruction.

U-Disk Master

1. Start up your device.
2. Launch the client device connected to your device.
3. Connect the storage devices (i.e.USB disk) to the USB port of the device.
4. Select **Start > Run** of the computer.
5. Input \\192.168.0.1\, in the open field and press OK.



6. Input User Name and Password. The default User Name is admin, Password is admin. Then you can view storage devices.

Logout

Select **Logout**, a pop-up window will appear as the following figure shown:

Click **OK** to logout the web page.

Troubleshooting

Voice Related Problems

Symptoms	Possible Problems/ Solutions
No Dial Tone.	Please wait for 1~2 minutes after the router is turned on. If 3G LED light is blinking, you have no good RF reception. Change the location of the router.
There is a prompt/ phone alert/ announcement as soon as I lift the phone off the hook.	Make sure your (U)SIM card is inserted correctly and the PIN number has been entered. If the PIN number has been entered incorrectly then you will need to enter the PUK code when prompted.
The line is noisy/ distorted when I lift the phone off the hook.	Remove any electrical appliance which is too close to the phone or router. The cable or phone set might be faulty.
I hear a rapid engaged tone as soon as I lift the phone off the hook.	Put the phone on hook and try again. If you are connected to the internet using the 2G (GSM) network, please disconnect this first.
After dialing the last digit I hear nothing /silence.	When you have finished dialing you can press the # key or wait 4-8 seconds to connect the call.
I can't make or receive a call when I am surfing on the net.	If you are connected using the 2G (GSM) network then you cannot surf the net and make a phone call simultaneously. Please disconnect the internet and wait 30 seconds to 1 minute before making a call.

Internet Related Problems

Symptoms	Possible Problems/ Solutions
I cannot access the internet at all.	Please check your configuration settings. Please wait 1~ 2 minutes for the router to initialize. Check your service indicator LED's.
The download or upload speeds are very slow.	The speed is dependent on signal strength. Check your signal strength and network type.

Others

Symptoms	Possible Problems/ Solutions
The RSSI signal indicator is always blinking or does not light.	This indicates poor reception. Try moving the router to another location near the window. Check the ANT button to see if you have press the ANT on but without connecting the external antenna.

Technical Parameters

Network & Frequency Band
EDGE/GPRS/GSM: 850/900/1800/1900MHz
HSPA+/HSUPA/HSDPA/UMTS: 850/900/1900/2100MHz

Power Adapter
Input: 100V~240V(AC), 50/60Hz
Output:+12V (DC), 1.5A

Data Service
HSUPA 5.76Mbps UL
HSDPA 28Mbps DL

Dimensions (W×H×D)
202mm×160mm×30.5mm

Weight
About 550g

Glossary

- AC: Alternating Current
- APN: Access Point Name
- DC: Direct Current
- DHCP: Dynamic Host Control Protocol
- DNS: Domain Name System (or Service or Server)
- DoS: Denial of Service
- EDGE: Enhanced Data GSM Evolution
- ESSID: Expanded Service Set Identifier
- Ethernet: A frame-based computer networking technology for local area networks (LANs)
- GSM: Global System for Mobile Communications
- GPRS: General Packet Radio Service
- HSDPA: High Speed Downlink Packet Access
- HSUPA: High Speed Uplink Packet Access
- IP: Internet Protocol
- LAN: Local Area Network
- LED: Light - emitting Diode
- MHz: Megahertz
- MTU: Maximum Transmission Unit
- PDP: Packet Data Protocol
- PIN: Personal Identification Number
- PPP: Point to Point Protocol
- PSTN: Public Switched Telephony Network
- PUK: PIN Unlocking Key
- RSSI: Radio Signal Strength Indicator
- RF: Radio Frequency

- SIP: Session Initiated Protocol
- UPnP: Universal Plug and Play
- (U)SIM: Subscriber Identification Module
- WCDMA: Wideband CDMA (Code-Division Multiple Access)
- WEP: Wired Equivalent Privacy
- WLAN: Wireless LAN
- WPA-PSK: Wi-Fi Protected Access–PreShared Key